VERSION WITH MARKINGS TO SHOW CHANGES MADE

TITLE:

TRANSMITTING CIRCUIT APPARATUS AND METHOD

SPECIFICATION:

OK At page 1, line 6:

The present invention relates to a transmitting circuit apparatus and method used in radio communications~~-etc~~.

OK At page 4, lines 20-21:

In addition, the configuration in Figure 15 showing an transmitting circuit apparatus of an optical base station which is another conventional example also requires the linearity of the E/O converter 423, optical fiber 425, and O/E converter 422 in addition to the large power consumption of the power amplifier 411. Therefore, although the configuration of the slave station is simple, it becomes ~~severe to secure the~~difficult to obtain linearity ~~and~~as power consumption ~~becomes large~~increases substantially.

OK At page 5, line 3:

In consideration of the above-described issues, the present invention aims to provide a transmitting circuit apparatus and method having good linearity, high transmission output power efficiency, and small power consumption.

OK At page 5, line 5:

~~The 1st invention~~One aspect of the present invention is a transmitting circuit apparatus comprising:

OK At page 5, lines 16-17:

~~The 2nd invention~~ Another aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, wherein the amplitude modulation data has multiple digital values, and

OK At page 5, lines 23-24:

~~The 3rd invention~~Still another aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, wherein the sigma-delta modulator is at least a second-order or higher-order sigma-delta modulator.

OK At page 6, lines 3-4:

~~The 4th invention~~Yet still another aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, comprising a band pass filter which reduces an unnecessary signal out of a transmitted frequency band of an output signal of the amplitude modulator and outputs the output signal.

OK At page 6, lines 8-9:

~~The 5th invention~~Still yet another aspect of the present invention is the transmitting circuit apparatus ~~according to1st invention~~, wherein the amplitude modulator has a power amplifier and performs amplitude modulation by controlling a power supply of the power amplifier on the basis of an output signal of the sigma-delta modulator.

OK At page 6, lines 14-15:

~~The 6th invention~~A further aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, wherein a class B or class C power amplifier is provided in an output stage of the amplitude modulator.

OK At page 6, lines 18-19:

~~The 7th invention~~A still further aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, wherein the frequency modulator has a phase-locked oscillator, which includes at least a variable frequency divider, and a second sigma-delta modulator, wherein the second sigma-delta modulator outputs a value, which is obtained by performing second-order or higher-order sigma-delta modulation of data which is obtained by adding the

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frequency modulation data to carrier frequency data, as a division number of the variable frequency divider, and

At page 7, lines 5-6:

~~The 8th invention~~A yet further aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, wherein the frequency modulator has a phase comparator, a loop filter, a voltage-controlled oscillator, a mixer, and an IF modulator,

At page 8, lines 1-2:

~~The 9th invention~~A still yet further aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, comprising:

At page 9, lines 4-5:

~~The 10th invention~~An additional aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, comprising:

At page 9, lines 22-23:

~~The 11th invention~~A still additional aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, wherein the sigma-delta modulator has:

At page 10, lines 12-13:

~~The 12th invention~~A yet additional aspect of the present invention is the transmitting circuit apparatus ~~according to 1st invention~~, wherein the sigma-delta modulator has a plurality of low-order sigma-delta modulators that is connected in multiple stages, and

At page 16, line 24:

Next, the operation and method of ~~such~~ this embodiment will be described.